Raphidiophrys viridis Archer, 1867

Most likely ID: n.a.

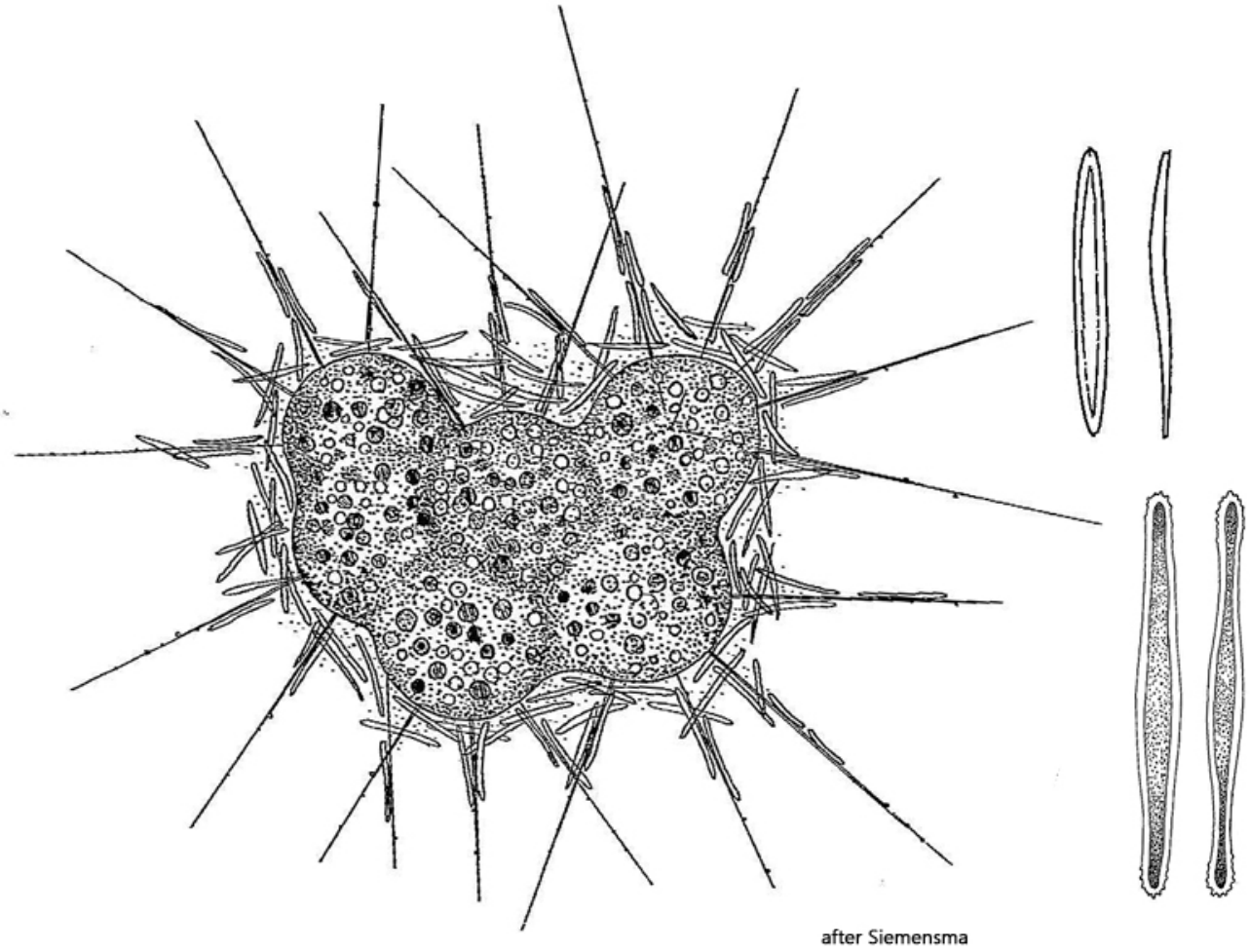
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Raphidiophrys viridis*

Diagnosis:

- cells about 50 µm in diameter (without sheat of scales)
- colonies of 5–18 specimen, tightly packed
- diameter of colonies about 200 µm
- scales rod-like, with slightly tapered ends
- scales 15–37 µm long, width about 3 µm
- poles of scales with small papillae (hard to see)
- cytoplasm green due to symbiotic algae
- globular nucleus with central nucleolus
- diameter symbiotic algae 5–6.5 µm
- numerous axopodia, about length of colony



Raphidiophrys viridis

I find *Raphidiophrys viridis* among the floating plants in the Simmelried. However, the species occurs only sporadically. I have records from May 2005 and then again 20 years later in June-July 2025. I found the colonies particularly frequently in old samples and on the walls and bottom of the vessels.

The colonies of *Raphidiophrys viridis* are very conspicuous in the samples, with a diameter of about 200 µm and green-colored cells (s. figs. 1, 2 and 3). The cells lie close together in the colonies and do not form long, slender plasma bridges like *Raphidiophrys elegans*. However, the essential distinguishing feature are the scales covering the colonies, which in *Raphidiophrys viridis* are elongated rods with tapered ends. They resemble the shape of a boat (s. figs. 9 and 10). In my population, the scales were 25–35 µm long. They are said to have fine striations and small papillae at the poles, but I was unable to detect these.

According to my observations, the nucleus has a large, central nucleolus (s. fig. 6). The numerous symbiotic algae in the cytoplasm have a slightly irregular shape and a diameter of 5.0–6.5 µm. They have a pyrenoid and their own cell nucleus (s. figs. 7 and 8). In addition,

the cytoplasm always contained some highly refractive granules. They do not appear to belong to the genus *Chlorella*. The symbiotic algae of *Rhaphidiophys viridis* resemble those of *Raphidiophrys elegans*.

More images and information on *Raphidiophrys viridis*: Ferry Siemensma-Microworld-*Raphidiophrys viridis*

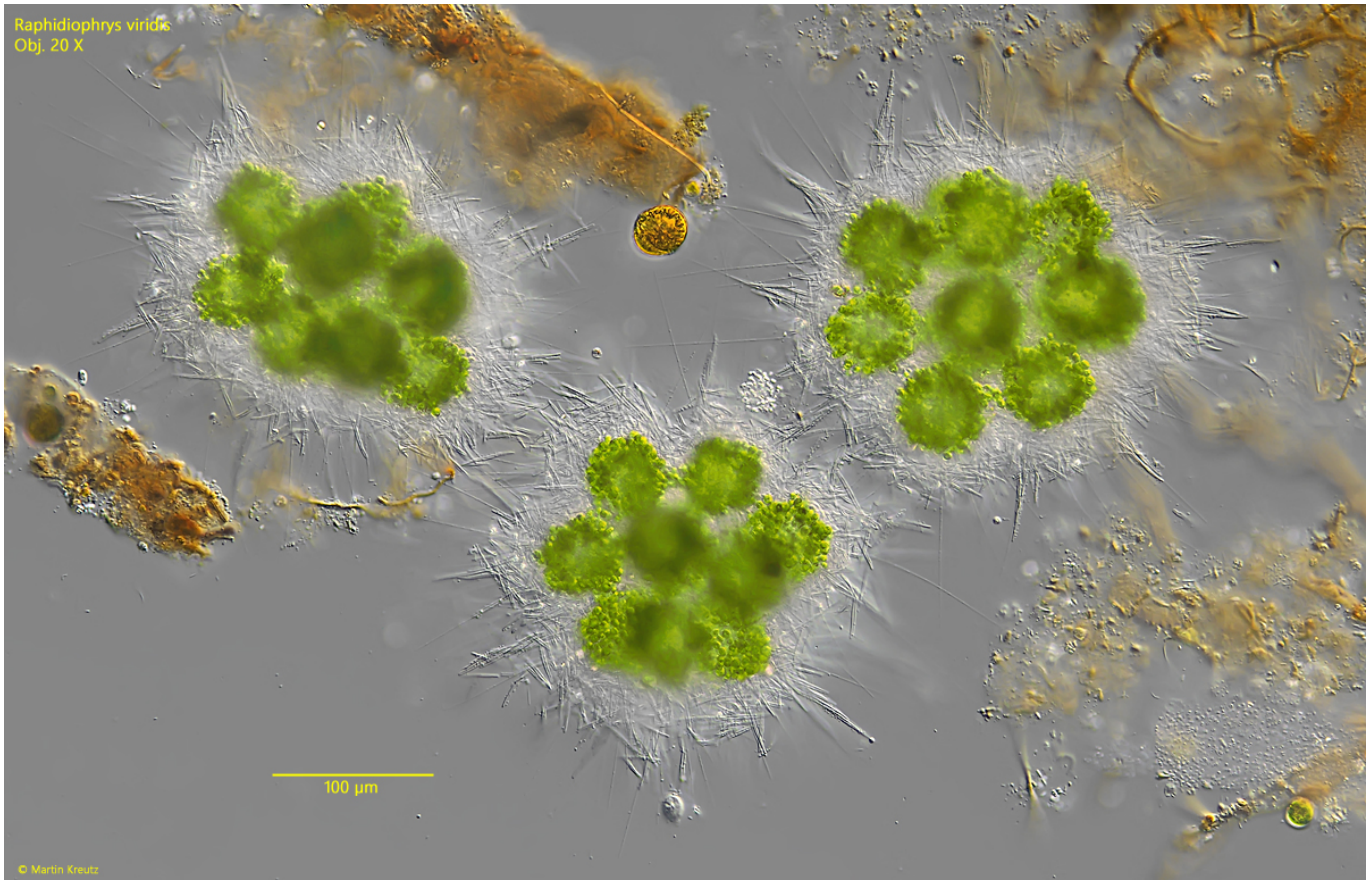


Fig. 1: *Raphidiophrys viridis*. D = 230–240 µm (of colonies). The colonies between detritus particles. Obj. 20 X.

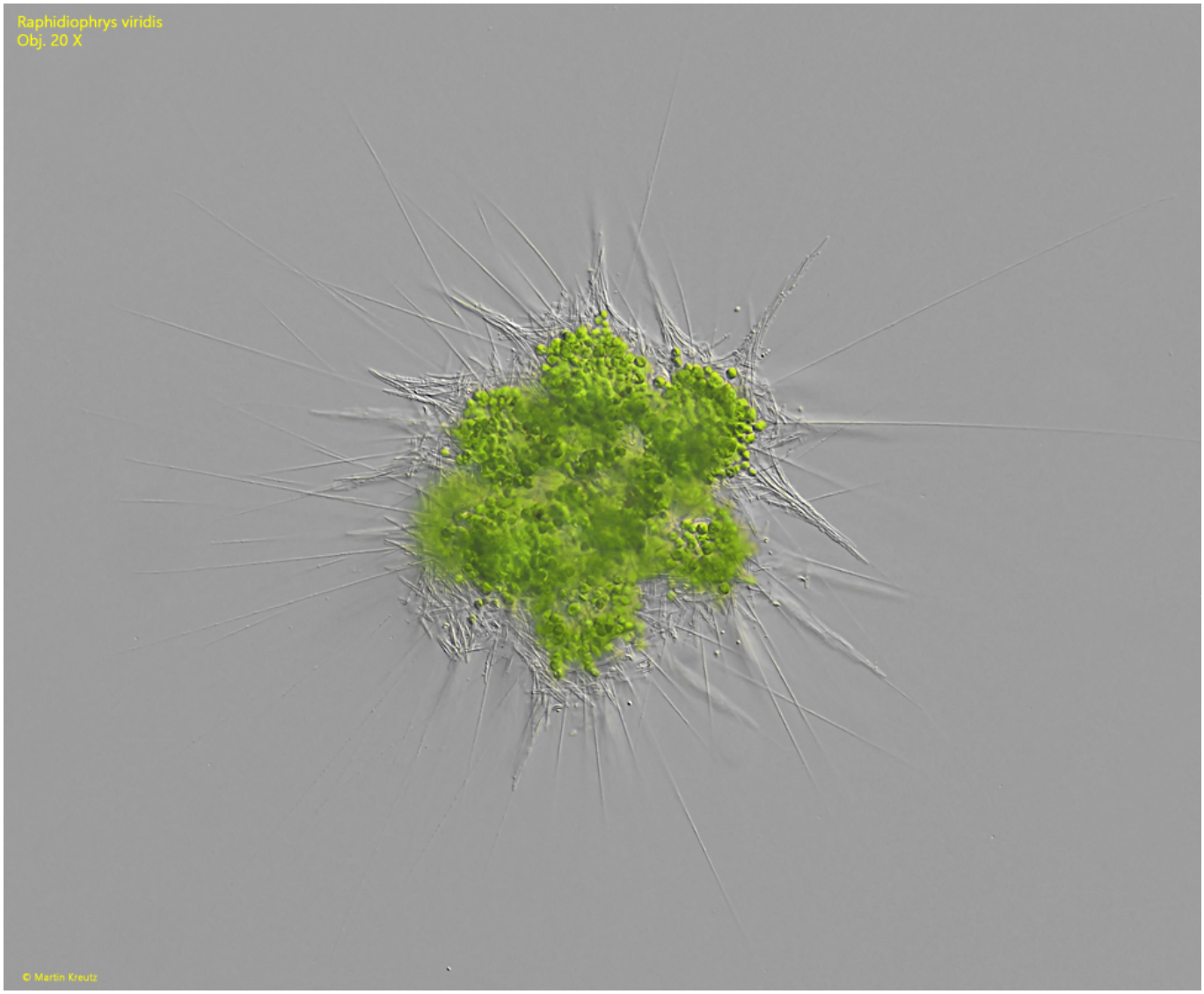


Fig. 2: *Raphidiophrys viridis*. D = 290 µm (of colony). A colony with fully extended axopodia. Obj. 20 X.

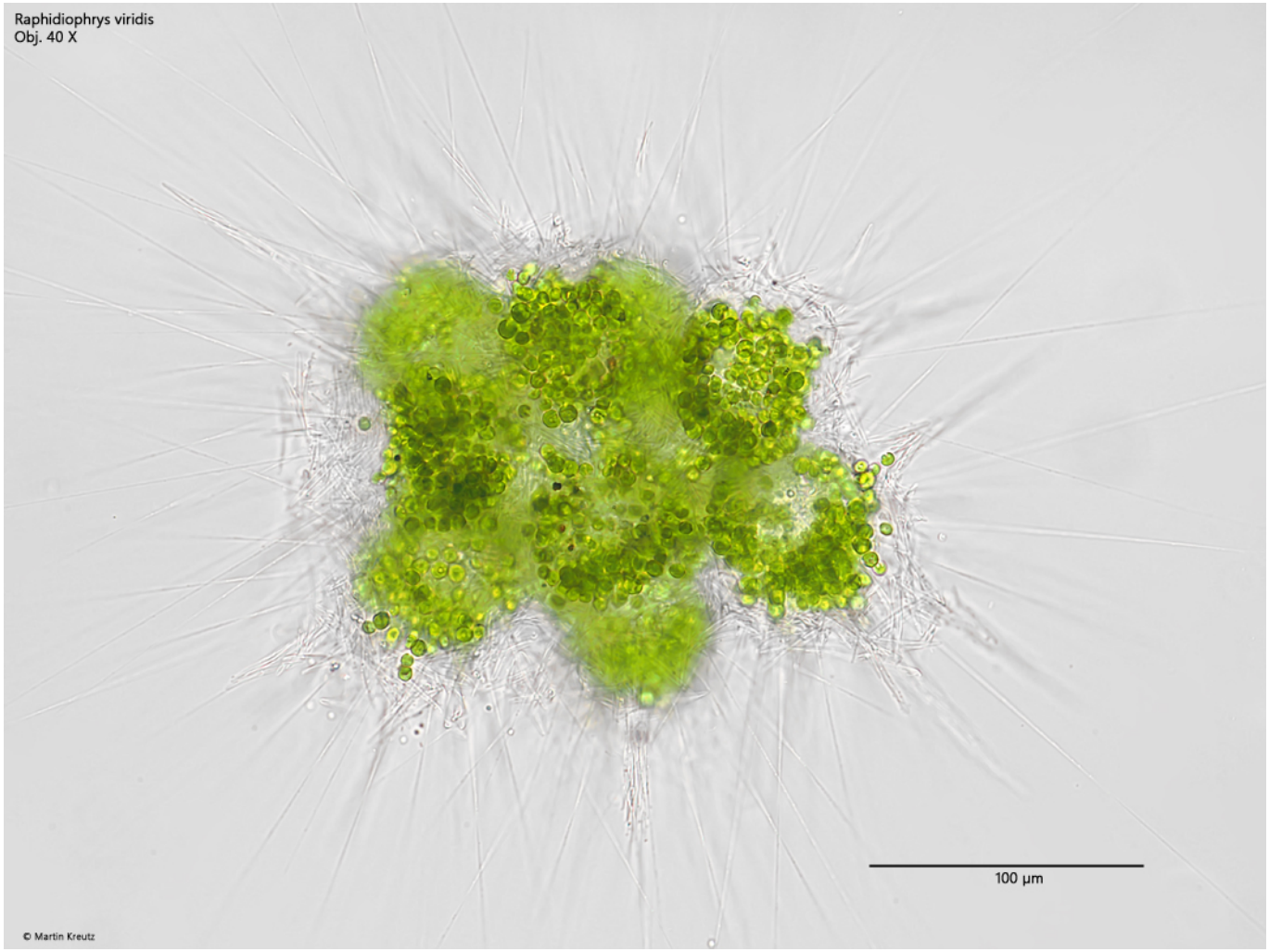


Fig. 3: *Raphidiophrys viridis*. D = 260 µm (of colony). A colony in brightfield illumination. Obj. 40 X.

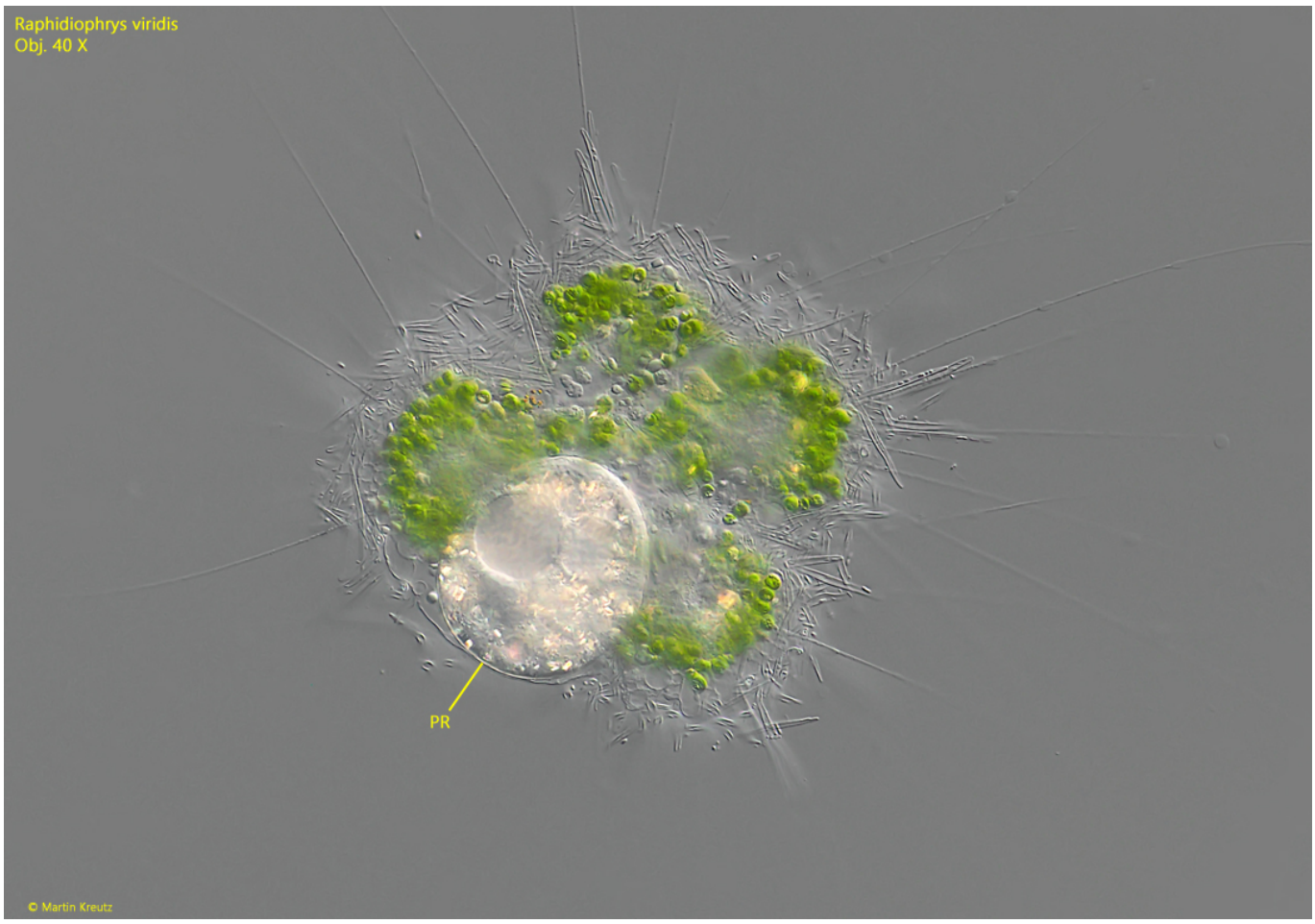


Fig. 4: *Raphidiophrys viridis*. A colony with catched prey (PR). The prey is a ciliate. Obj. 40 X.


Raphidiophrys viridis
Ob. 40 X
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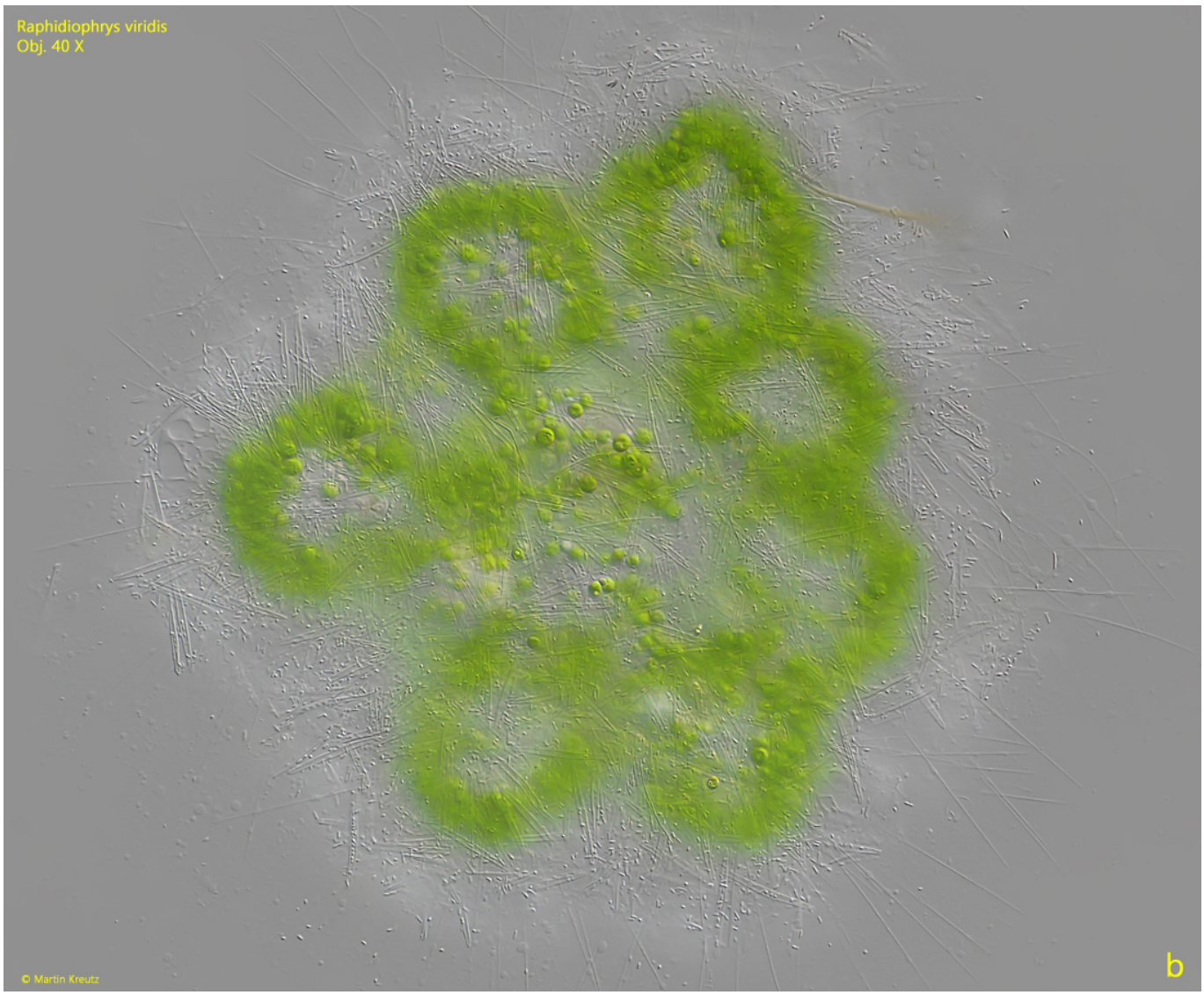

Fig. 5 a-b: *Raphidiophrys viridis*. Two focal planes of a slightly squashed colony. Obj. 40 X..

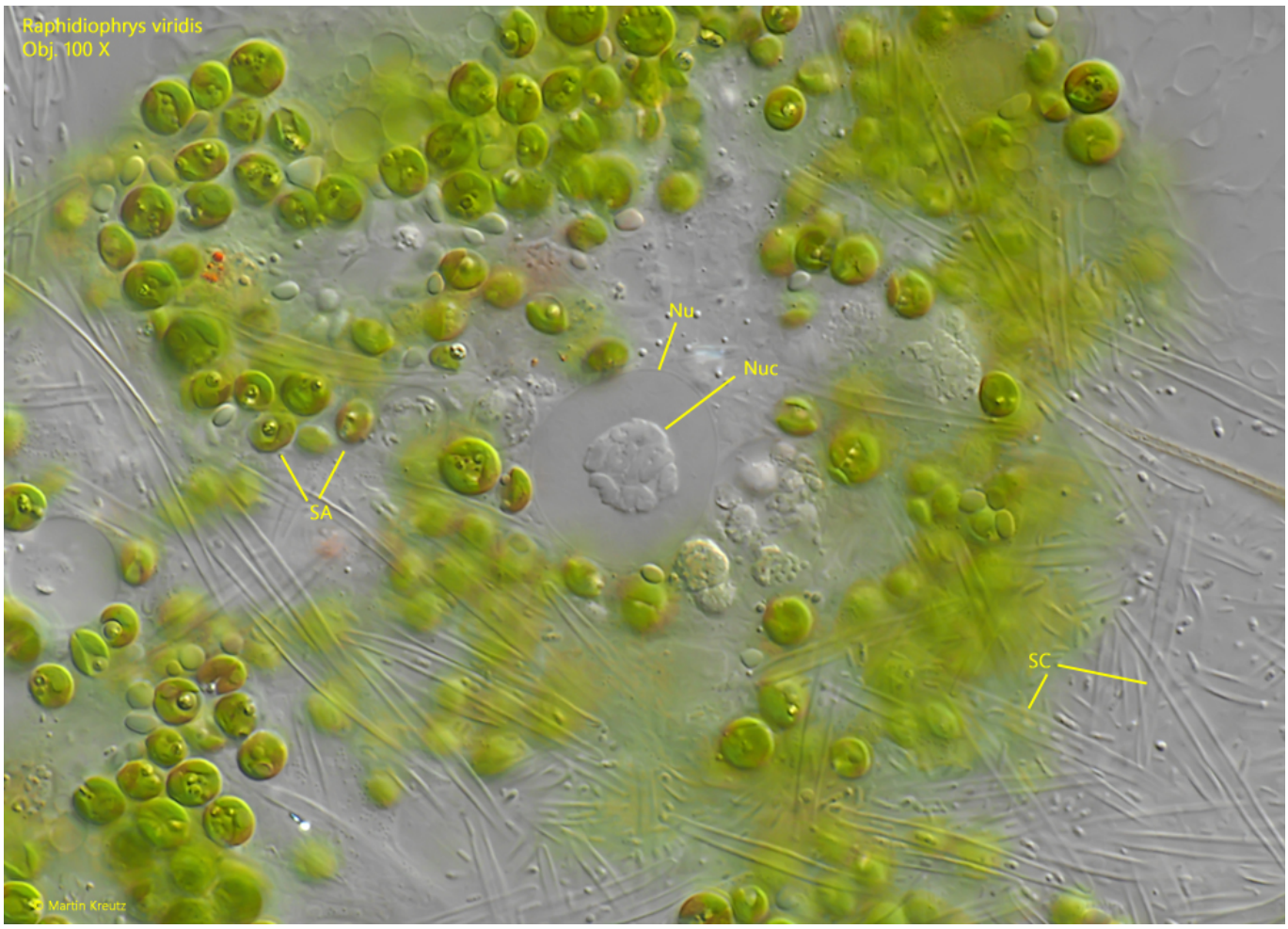

Fig. 6: *Raphidiophrys viridis*. The nucleus (Nu) with the central nucleolus (Nuc) in a squashed specimen. SA = symbiotic algae, SC = scales. Obj. 100 X.

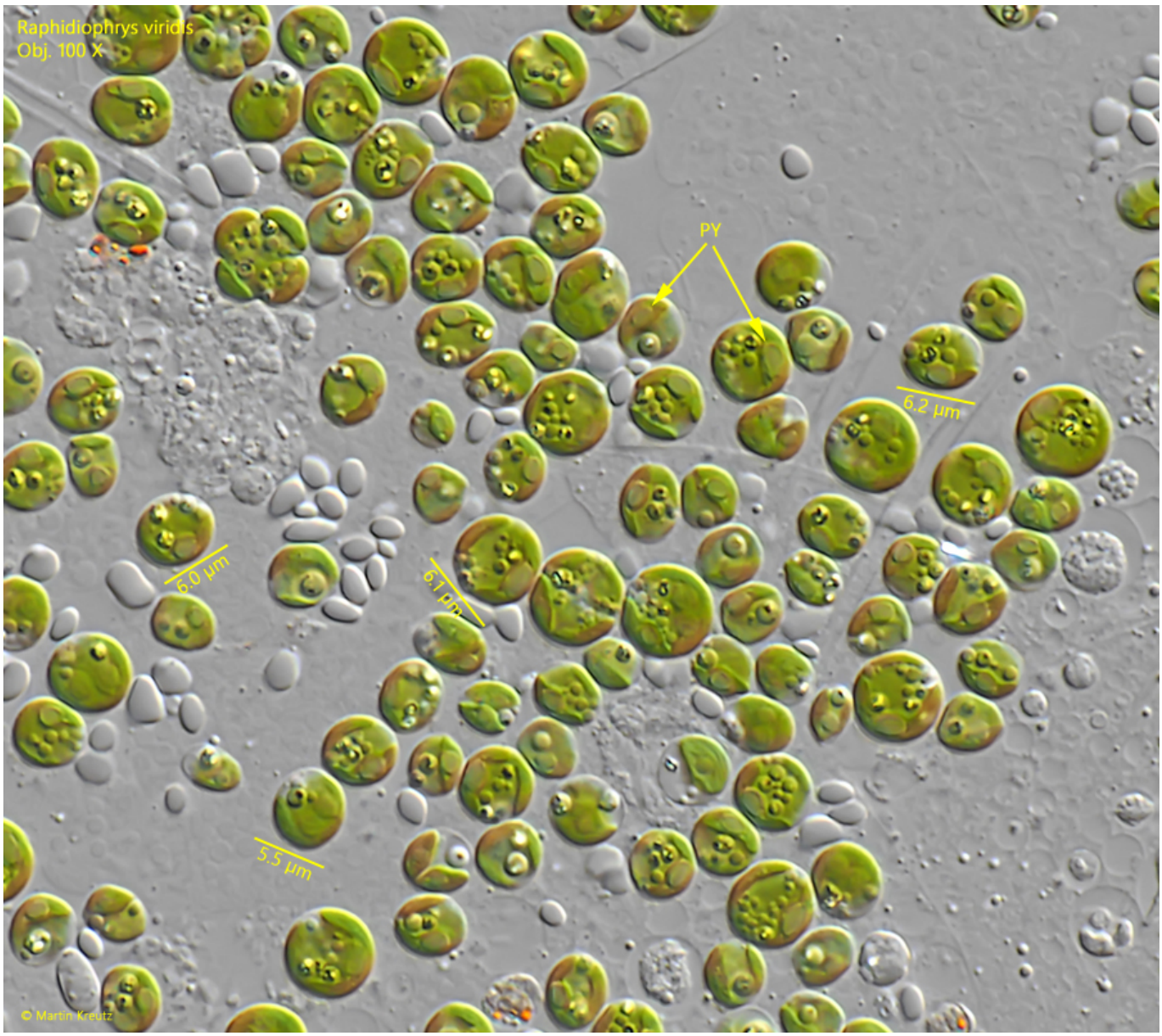

Fig. 7: *Raphidiophrys viridis*. The symbiotic algae in a strongly squashed specimen. The symbiotic algae have a slightly irregular shape and a diameter of 5.0–6.5 µm. A pyrenoid (PY) is present. The algae are not of the *Chlorella* type. Obj. 100 X.

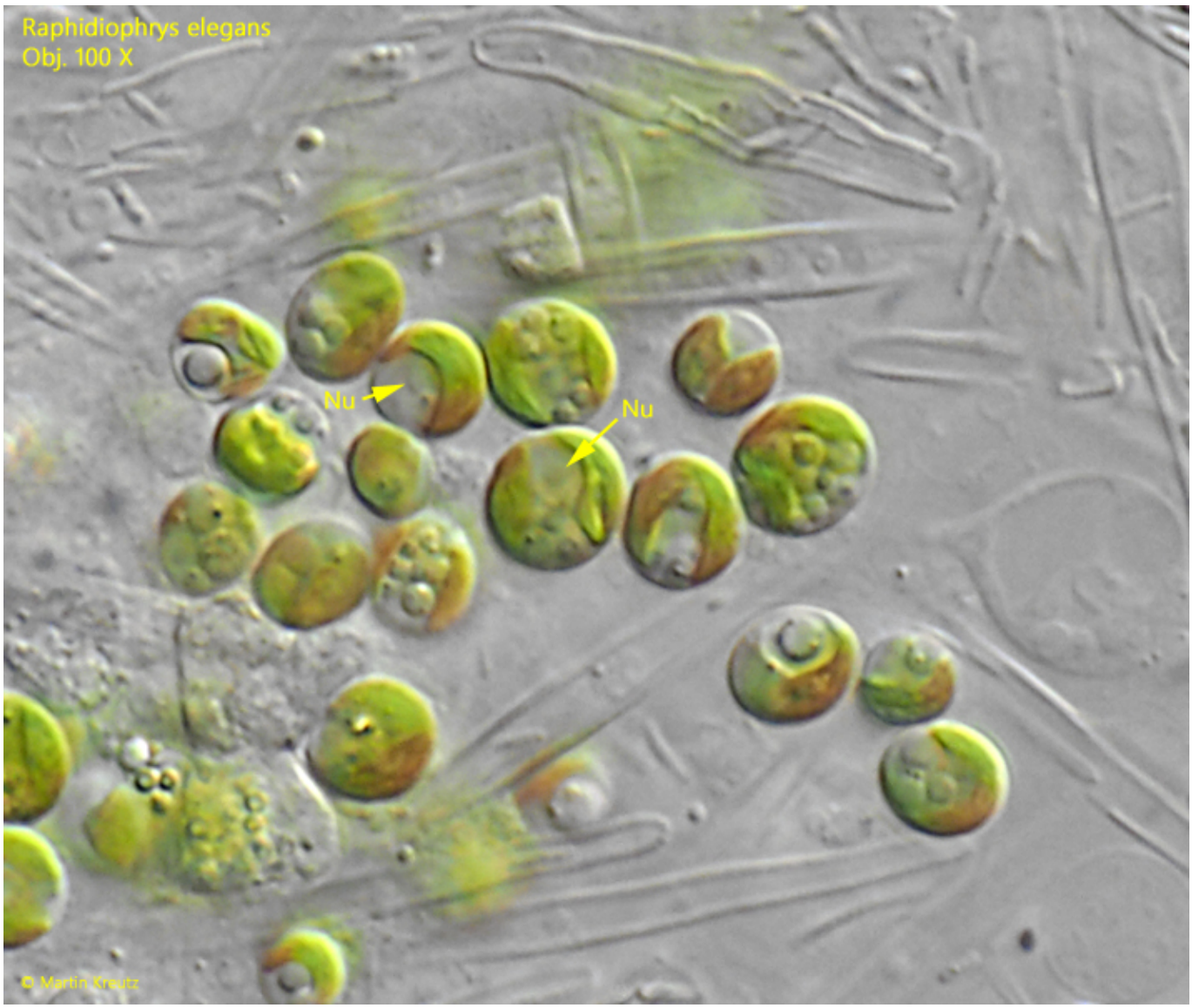

Fig. 8: *Raphidiophrys viridis*. The symbiotic algae of a second specimen with the visible nucleus (Nu). Obj. 100 X.

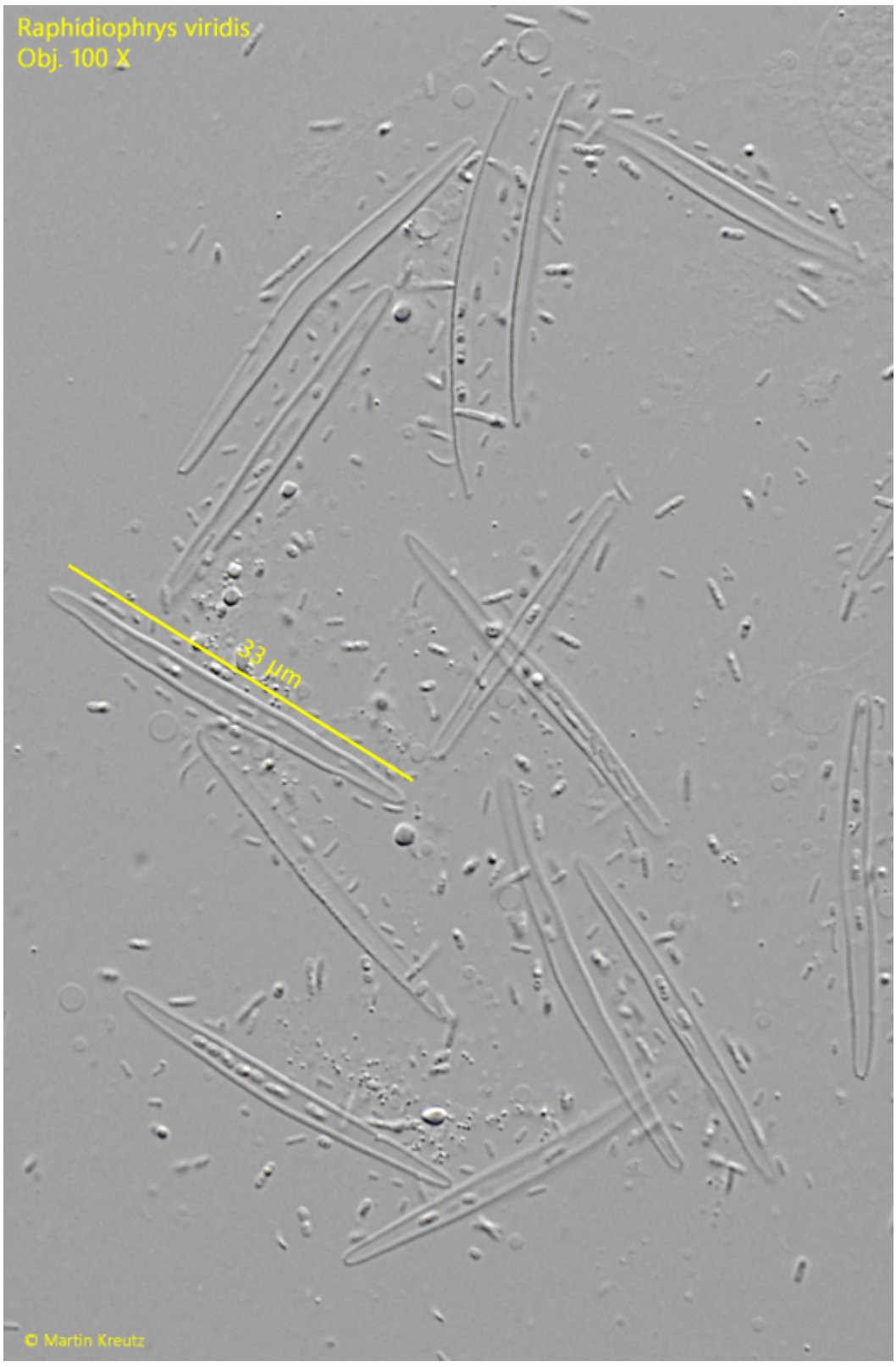

Fig. 9: *Raphidiophrys viridis*. The rod-shapes scales with tapered ends of a strongly squashed specimen. The scales are 29–34 µm long. Obj. 100 X.

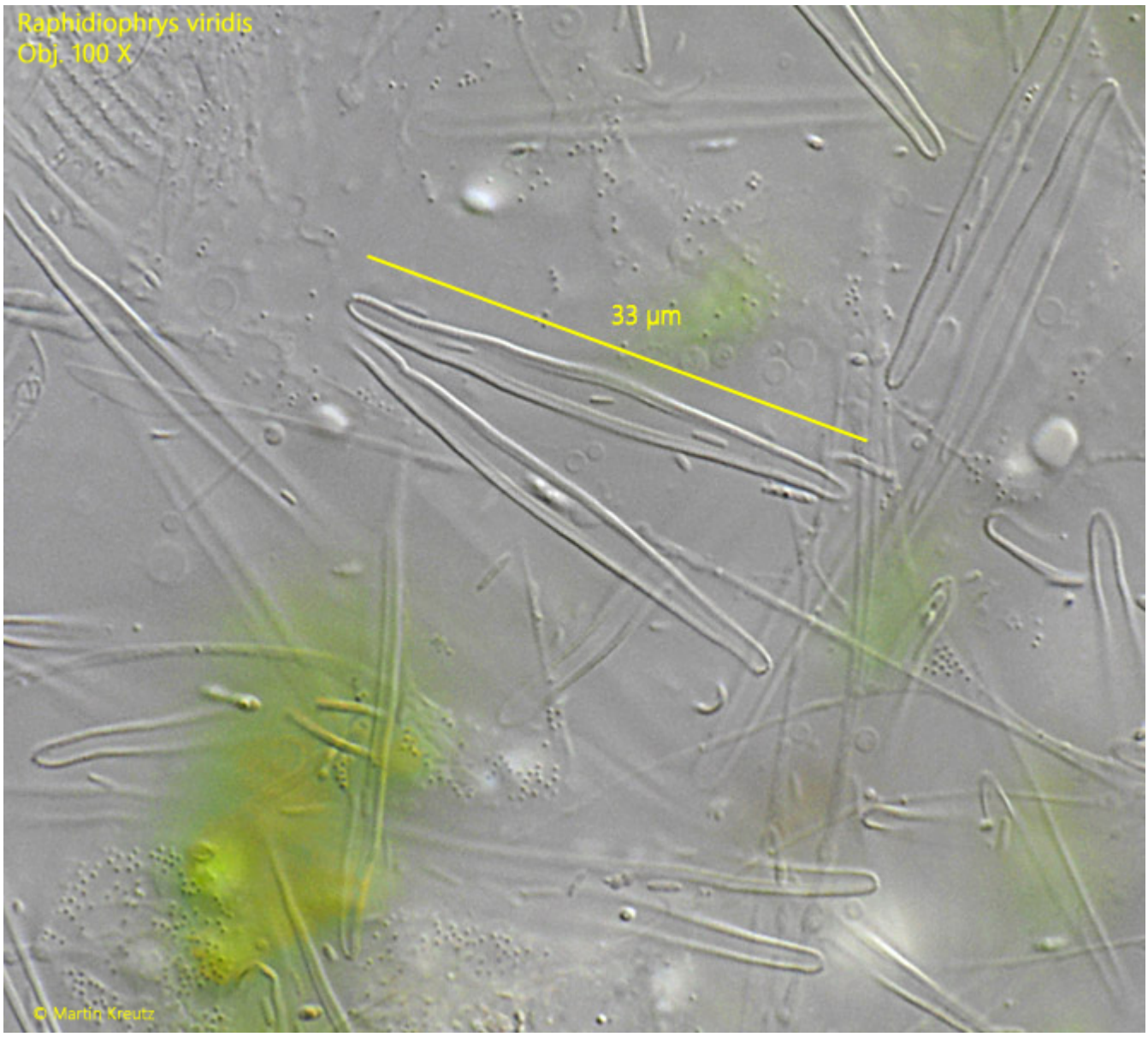

Fig. 10: *Raphidiophrys viridis*. The scales of a second, strongly squashed specimen. Obj. 100 X.